

# University of Illinois Fire Service Institute

## Course Syllabus

**Course Title:** Basic Operations / NFPA Firefighter I Academy

**Course Duration:** 370 hours

**Program:** Firefighting

**Course Prerequisites:** None

**Required for National Certification (ProBoard / IFSAC):**  
Hazardous Materials Operations

**Course Description:**

The Basic Firefighter / NFPA Firefighter I Academy is designed to give new firefighters the practical and cognitive training needed to operate safely and effectively on the fireground. The Academy exceeds the requirements outlined by the Illinois Office of the State Fire Marshal for entry-level firefighter training. Academy focuses on an intense hands-on approach to firefighter, which promotes both skill competency and an understanding of the fireground. Students complete numerous fireground-speed evolutions, and rolling responses, which encourage them to apply their skills to a variety of scenarios.

In addition to the basic skills that are taught, firefighters are taught how to thrive in their profession. This is accomplished through health and wellness education from a holistic standpoint that has a focus on physical, as well as, mental health and healthy lifestyles for firefighters.

This course will also provide first responders with the knowledge and skills to understand what hazardous substances are and the risk associated with them in an incident; recognize the presence of hazardous substances in an emergency; understand the role of the emergency responder at the awareness level, including site security and control; have understanding of the U.S. Department of Transportation Emergency Response Guidebook; realize the need for additional resources, call for appropriate assistance, and to make appropriate notifications to the community. This portion of the course meets all applicable national and state standards, as well, as all statutory requirements for hazardous materials awareness level training.

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Lastly, the Fire Academy will provide education in Technical Rescue Awareness. This subject area will begin to prepare local responders to operate as a local member of a regional team within the National Incident Management System at a Chemical, Biological, Radiological, Nuclear, or Explosive (CBRNE) Weapons of Mass Destruction (WMD) event requiring statewide response that has resulted in the need for a technical rescue. Subject areas include: standards, structural collapse rescue, rope rescue, confined space rescue, vehicle and machinery rescue, water and ice rescue, wilderness search and rescue, trench and excavation rescue, and incidents involving WMD.

This subject matter is designed for the basic first-in company and will provide first responders with the information needed to identify the rescue situation, its specific hazards, and the initial company operations to be performed.

## **Course Requirements and/or Recommendations:**

Pre-Course Work – Read documents online.

Course Work – Satisfactory completion of all hands on skills evaluations

Passing cumulative score of at least 70%.

Academic component weights are as follows:

Quizzes: 10% of final grade

Mid-term: 30% of final grade

Final: 40% of final grade

Workbook: 20% of final grade

Post-Course Work –

**Required for National Certification (ProBoard / IFSAC):**

Hazardous Materials Operations

## **Required Textbook:**

Essentials of Fire Fighting, Seventh Edition. IFSTA, 2018.

## **Course Policies:**

**Attendance Policy:** IFSI requires students to attend (100%) or make up all course content that leads to certification. Students are expected to attend on time and to remain in class for the duration of the course. Students **MUST COMPLETE** all portions of a certification course, both classroom and practical, to be eligible to receive their certification.

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If a student misses any portion of class with an accumulated absence of 20% or less of scheduled class time, it will be the student's responsibility to arrange the make-up of the missed course content with the instructor(s) or program manager. The student must make up the specific course content that s/he missed, not just the hours. Make-ups are limited to 20% of scheduled class time. Make-ups must be documented on the class roster. If a student's absence is greater than 20% refer to "True Emergencies" section of the IFSI Examination Policy.

**Safety Policy:** Students shall understand and follow all instructions pertaining to operational safety, as stated by instructors, or as written in course materials. Instructors and students shall be mindful of safety at all times. Conduct judged to be unsafe shall be grounds for dismissal from the course.

**Academic Integrity Policy:** IFSI has the responsibility for maintaining academic integrity so as to protect the quality of the education provided through its courses, and to protect those who depend upon our integrity. It is the responsibility of the student to refrain from infractions of academic integrity, from conduct that may lead to suspicion of such infractions, and from conduct that aids others in such infractions. Any violation of the code of conduct is grounds for immediate dismissal from the course.

**Grading Policy:** Decisions regarding certificates of course completion shall be made solely by the lead instructor of the course. All grading of exams shall be conducted by the Curriculum/Testing Office. All grading of practical exercises shall be based upon the standards set by the regulatory agency referenced in the course material and IFSI.

Retesting: If a student fails to pass an exam, retesting takes place on set dates at regional sites across the state. More information is provided in the course completion e-mail and on the IFSI website.

**American Disabilities Act:** As guaranteed in the Vocational Rehabilitation Act and in the American Disabilities Act, if any student needs special accommodations, they are to notify their instructor and provide documentation as soon as possible so arrangements can be made to provide for the student's needs. If arrangements cannot be made at the class site, the student will test at an alternative time and place where the special accommodations can be made.

**Evaluation Strategy:** Students will be evaluated with a mid-term and end of course exams. In addition, quizzes will be delivered at least weekly and performance evaluation checklists will be administered at various times during weeks 2-7.

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## Course Content:

### Module: 1

Title: Introduction to the Fire Service and Firefighter Safety

Terminal Learning Objective:

At the conclusion of this module, the student will explain the structure of Fire Departments and the safe practices of a firefighter.

### Module: 2

Title: Academy Orientation

Terminal Learning Objective:

At the conclusion of this module, the student will identify the expected duties of a candidate during the Academy.

### Module: 3

Title: Firefighter Personal Protective Equipment

Terminal Learning Objective:

At the conclusion of this module, the student will use various types of protective equipment.

### Module: 4

Title: Apparatus

Terminal Learning Objective:

At the conclusion of this module, the student will identify the various types of fire department apparatus.

### Module: 5

Title: Building Construction

Terminal Learning Objective:

At the conclusion of this module, the student will identify building construction feature and how fire and heat affect structural components and materials.

### Module: 6

Title: Fire Dynamics

Terminal Learning Objective:

At the conclusion of this module, the student will explain principles of fire behavior, and how it may affect fireground procedures.

### Module: 7

Title: Hose

Terminal Learning Objective:

At the conclusion of this module, the student will explain features of fire hose and appliances.

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Module: 8

Title: Hose Operations and Hose Streams

Terminal Learning Objective:

At the conclusion of this module, the student will be able to describe what it takes for an effective hose-line operation.

Module: 9

Title: Ground Ladders

Terminal Learning Objective:

At the conclusion of this module, the student will explain proper procedures for utilizing fire service ladders.

Module: 10

Title: Tactical Ventilation

Terminal Learning Objective:

At the conclusion of this module, the student will explain the proper uses and safety considerations of ventilation.

Module: 11

Title: Structural Search and Rescue

Terminal Learning Objective:

At the conclusion of this module, the student will be able to identify the proper procedures to use when conducting a search and rescue operation.

Module: 12

Title: Forcible Entry

Terminal Learning Objective:

At the conclusion of this module, the student will explain principles and procedures of forcible entry.

Module: 13

Title: Ropes and Knots

Terminal Learning Objective:

At the conclusion of this module, the student will demonstrate the proper techniques of utilizing rope and tying knots.

Module: 14

Title: Portable Extinguishers

Terminal Learning Objective:

At the conclusion of this module, the student will explain the uses and operations of portable extinguishers.

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Module: 15

Title: Fire Suppression

Terminal Learning Objective:

At the conclusion of this module, the student will explain principles of fire control.

Module: 16

Title: Vehicle Fires

Terminal Learning Objective:

At the conclusion of this module, the student will explain the basic tactics for extinguishing vehicle fires.

Module: 17

Title: Basement Fires

Terminal Learning Objective:

At the conclusion of this module, the student will explain basic strategies and tactics associated with extinguishing basement fires.

Module: 18

Title: Foam

Terminal Learning Objective:

At the conclusion of this module, the student will be able to effectively use firefighting foam.

Module: 19

Title: Installed Systems

Terminal Learning Objective:

At the conclusion of this module, the student will identify various types of installed fire suppression systems.

Module: 20

Title: Firefighter Survival

Terminal Learning Objective:

At the conclusion of this module, the student will understand techniques to enhance firefighter survival.

Module: 21

Title: Rapid Intervention Teams (RIT)

Terminal Learning Objective:

At the conclusion of this module, the student will explain the fundamental functions of a Rapid Intervention Team (RIT).

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Module: 22

Title: Loss Control

Terminal Learning Objective:

At the conclusion of this module, the student will explain loss control on the fireground.

Module: 23

Title: Mobile Water Supply

Terminal Learning Objective:

At the conclusion of this module, the student will discuss considerations of a mobile water supply operation.

Module: 24

Title: Master Streams

Terminal Learning Objective:

At the conclusion of this module, the student will explain the basic operation of a master stream used on the fireground.

Module: 25

Title: Communications

Terminal Learning Objective:

At the conclusion of this module, the student will explain the function of different communication systems used in the fire service.

Module: 26

Title: Fire Origin and Cause Determination

Terminal Learning Objective:

At the conclusion of this module, the student will explain firefighter responsibilities during a fire investigation.

Module: 27

Title: Community Risk Reduction

Terminal Learning Objective:

At the conclusion of this module, the student will describe fire and life safety programs as they pertain to community risk reduction.

Module: 28

Title: Wildland Firefighting

Terminal Learning Objective:

At the conclusion of this module, the student will explain principles and procedures of fighting ground cover/wildland fires.

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Module: 29

Title: Monitoring

Terminal Learning Objective:

At the conclusion of this module, the student will describe atmospheric monitoring procedures.

## Reference List:

- Brannigan, Francis. Building Construction for the Fire Service Quincy MA: National Fire Protection Association, 1994.
- Brannigan, Francis "The Building is Your Enemy: Part 5" Firehouse July 1998: 58-64.
- Brannigan, Francis "The Dangerous Five Classes of Buildings" Fire Engineering May 1999: 120-125.
- Brannigan, Francis "The Building is Your Enemy: Heavy Timber Construction" Firehouse July 2000: 64-70.
- Brennan, Tom. "Random Thoughts - Collapse: Movement of a Structure" Fire Engineering June 2000: 136.
- Brennan, Tom. "Random Thoughts - The Signs of Impending Building Collapse" Fire Engineering July 2000: 108.
- Emergency Response to Terrorism-Job Aid, *FEMA 2000*
- Emergency Response to Terrorism- Basic Concepts: Student Manual, *FEMA 2002*
- FEMA Publication FA-243, (August 2013) U.S. Fire Administration Agency, Federal Emergency Management Agency, Emmitsburg, MD.
- Firefighter Fatalities in the United States in 2013 (November 2014) U.S. Fire Administration, Federal Emergency Management Agency, Emmitsburg, MD
- Methods to Identify Alternative Fuel Vehicles, (October 2019) National Alternative Fuels Training Consortium
- Wilson, Sean. The Journeyman Firefighter (August 2016) Rise Above Fire Training, Shelby Township, MI



# University of Illinois Fire Service Institute

## Reading Assignments Index

### **Textbook:**

Essentials of Fire Fighting, Seventh Edition. IFSTA, 2018.

*Reading assignments are located in the textbook and this student manual*

### **B**

Basement Fires, pgs. 681-684

Building Construction, pgs. 75-114

### **C**

Candidate Rules & Regulations (Student Manual)

Cleaning Procedures (Student Manual)

Communications, pgs. 55-74

Community Risk Reduction, pgs. 973-1014

### **D**

Dress Code Policy (Student Manual)

### **F**

Fire Dynamics, pgs. 115-180

Fire Origin and Cause Determination, pgs. 931-956

Fire Suppression, pgs. 667-693 and 704-706

Firefighter Personal Protective Equipment, pgs. 181-250

Firefighter Survival, pgs. 433-439 and 467-475

Foam, pgs. 869-896

Forcible Entry, pgs. 369-430

### **G**

Ground Ladders, pgs. 313-368

### **H**

Hose, pgs. 539-584

Hose Operations and Hose Streams, pgs. 585-666

### **I**

Installed Systems, pgs. 685-687

Introduction to the Fire Service and Firefighter Safety, pgs. 9-54

### **L**

Loss Control, 737-780

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## **M**

Master Streams, pgs. 626-666

Mobile Water Supply, pgs. 594-597

Monitoring, pgs. 440-490

## **P**

Portable Extinguishers, pgs. 251-274

## **R**

Rapid Intervention Teams (RIT), pgs. 467-475

Ropes and Knots, pgs. 275-312

## **S**

Standard Operating Guidelines (Student Manual)

Structural Search and Rescue, pgs. 431-439 and 450-490

## **T**

Tactical Ventilation, pgs. 491-538

## **V**

Vehicle Fires, pgs. 694-704

## **W**

Wildland Firefighting, pgs. 707-736